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	APPLICATION NO.	FILING	DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/719,562		11/20/2003		Patrick J. Ledden	NOVAM40531	3562	•
	21587	7590	12/13/2004		EXAM	INER	
	ALTMAN &			ARANA, LOUIS M			
	6 BEACON S' BOSTON, MA				ART UNIT	PAPER NUMBER	•
	BOSTON, MI	1 02100			2859		

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary    Comparison   Compar			(Analisantia)						
### Examiner   Louis M. Arana   2859  The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  Examination of time may be available under the provinces of 3° CFR 1.73(b), in no event, however, may a right be limited from the province of 3° CFR 1.73(b), in no event, however, may a right be limited from the province of 3° CFR 1.73(b), in no event, however, may a right be limited from the maining date of the communication of the province of 3° CFR 1.73(b), in no event, however, may a right be limited from the maining date of the communication of the province of 3° CFR 1.74(b).  The part of the province of the province of 3° CFR 1.75(b), in no event, however, may a right be limited from the maining date of this communication of the province of the provinc		Application No.	Applicant(s)						
Louis M. Arana  2839  — The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  THE MAILING DATE OF THIS COMMUNICATION.  If the period for reply aspecified shore is less than thin; (60) days, a reply veillant he statuted in the period for reply aspecified shore is less. Than thin; (60) days, a reply veillant he statuted in the period for reply aspecified shore is less than thin; (60) days, a reply veillant he statuted in the Month's from the mailing date of finis communication.  If the period for reply aspecified shore is less than thin; (60) days, a reply veillant he statuted in the statute reply veillant he stat	Office Action Summers	10/719,562	LEDDEN, PATRICK J.						
The MALLNG DATE of this communication appears on the cover sheet with the correspondence address—Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  Estembors of time may be available under the providence of 3 CFR 1.13(a). In or event, however, may a reply be limely filled  **Ether the prior for reply specified above is less than thirty (30) days, a large prior the prior of the reply specified above is less than thirty (30) days, and the considered limely.  **If the prior for reply specified above is less than thirty (30) days, and the considered limely.  **If the prior for reply specified above is less than thirty (30) days, and the considered limely.  **If the prior for reply specified above is less than thirty (30) days, and the considered limely.  **If the prior for reply is appetited store, the maximum datatory perior via legal and will express (30, MONTH) for on the maining date of this communication.  **Failure to septy within the ect or etherode prior for reply vially. It is a replication, even if finally filled, may reduce a replication.  **Failure to express the communication (s) filled on	Oπice Action Summary	Examiner	Art Unit						
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  □ Caleracian of time may be available used in the provisions of 37 CFR 1.75(b). In no event, however, may a reply be timaly filled  □ If the prior for may be period above. The mostman distutory pariot will apply and will expire Stx (b) MONTHS from the mailing date of this communication of this (70) days will be considered timely.  □ If Do pariod for ringly is specified above, the mostman distutory pariot will apply and will expire Stx (b) MONTHS from the mailing date of this communication. The mailing date of this communication, even if timely filled, may reduce any surrect patient term adjustment. Sea 37 CFR 1.704(b).  Status  1)□ Responsive to communication(s) filled on									
THE MAILING DATE OF THIS COMMUNICATION.  Elementor time may be available under the provision of 37 CPR 1.73(s). In or event, however, may a reply be timely filled after SIX (S) MONTHS from the mailing date of this communication, and the second of the communication of the second of		ears on the cover sheet with the c	orrespondence address						
1) Responsive to communication(s) filed on	<ul> <li>THE MAILING DATE OF THIS COMMUNICATION.</li> <li>Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any</li> </ul>								
2a)  This action is FINAL. 2b)  This action is non-final.  3  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4)  Claim(s)	Status								
3	1) Responsive to communication(s) filed on	 _•							
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4)	2a) ☐ This action is FINAL. 2b) ☒ This	action is non-final.	•						
4)		, ==							
4a) Of the above claim(s) is/are withdrawn from consideration.  5) □ Claim(s) is/are allowed. 6) ☒ Claim(s) is/are pected. 7) □ Claim(s) is/are objected to. 8) □ Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) □ The specification is objected to by the Examiner.  10) ☒ The drawing(s) filed on 200 November 2003 is/are: a) ☒ accepted or b) □ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) □ All b) □ Some * c) □ None of:  1. □ Certified copies of the priority documents have been received.  2. □ Certified copies of the priority documents have been received in Application No  3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) □ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  5) □ Notice of Informal Patent Application (PTO-152)	Disposition of Claims								
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## **DETAILED ACTION**

## Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Glover et al. P.N. 4,613,949(Glover).

Glover discloses the use of a composite pulse for time reversal in Magnetic Resonance Imaging. Applicant's attention is directed to Fig. 2 and corresponding description. At least two 90 degree RF pulses are used in an imaging sequence that have different spatial characteristics. See 30a, 30b and 30c. Note that the composite RF pulse is generated with an orthogonal inductor system as described on the first paragraph of col.

- 6. The longest of the relaxation time constants as used in Glover is the spin-echo relaxation constant also known as T2. Thus spin echo response signal e.g. 35 is produced by the combined effect of composite pulses 30a, 30b and 30c.
- 3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nishimura and Shaka disclose methods for correcting the effect of RF pulse inhomogeneity in Magnetic Resonance experiments. Note the abstract and background of the invention for each disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis M. Arana whose telephone number is (571) 272-2236. The examiner can normally be reached on M-Thurs. Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F Gutierrez can be reached on (703) 308-3875. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Louis M. Araha Primary Examiner Art Unit 2859

lma 12/6/04